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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WILSON, JACQUELINE B	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/439,555	YASUDA, HITOSHI	
	Examiner	Art Unit	
	Jacqueline Wilson	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 16-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9 and 17-28* is/are rejected.

7)☒ Claim(s) *8,10-14 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-14, and 16-19 have been considered but are moot in view of the new ground(s) of rejection.

Please see new ground of rejection below. With respect to Claim 20, Nakamura specifically teaches a control device (1, 21) restrains the focus adjusting system from being driven in a same direction if the control device determines that the focus adjusting system has been consecutively driven in the same direction (step S007 determines if the image is in focus during the mountain climbing control (same direction) and step S301 stops (restrains) from further adjustments), is performed before the step of determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of times (see step S008, in which step S301 is performed before S008 if the image is in focus) while causing the driving device to drive the focusing adjusting system. Nakamura teaches this control is done before determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of times (the data is compared to a predetermined value) in step S102. Therefore, the rejection of Claim 20 is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (US 5,337,084).

Regarding Claim 20, Nakamura teaches a control device (1, 21) which restrains the focus adjusting system from being driven in a same direction if the control device determines that the focus adjusting system has been consecutively driven in the same direction (step S007 determines if the image is in focus during the mountain climbing control (same direction) and step S301 stops (restrains) from further adjustments, otherwise step S008 determines if it has gone over the peak in which the focusing adjusting system is moved in the opposite direction at S009), before determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of times (see step S008, in which step S301 is performed before S008 if the image is in focus) while causing the driving device to drive the focusing adjusting system. Nakamura specifically teaches this control is done before determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of times (the data is compared to a predetermined value) in step S102.

Regarding Claim 21, Nakamura teaches the apparatus includes an image pickup apparatus (fig. 1, element 3).

Regarding Claim 22, Nakamura teaches the apparatus includes a camera (fig. 1 is a block diagram of a camera).

Regarding Claim 23, Nakamura teaches the apparatus includes an optical apparatus (lens; see fig. 1, element 2).

Regarding Claim 24, Nakamura teaches restraining the focus adjusting system from being driven in a same direction (step S301) if a control device determines that the focus adjusting system has been consecutively driven in the same direction (in which Step S007 performs hill climbing until the image is in-focus), before determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of times (Step S007 does not determine if the focusing direction is the same or not more than a predetermined number of time, but teaches if the signal is in focus; this is interpreted as before determining whether a focusing direction of the focus adjusting system is the same or not more than a predetermined number of time since it is not performed) while driving the focus adjusting system from one of a state in which a near-distance object is in focus and a state in which a far-distance object is in focus to the other (inherent since either one or the other is being captured).

Claim 25 is analyzed and discussed with respect to Claim 24. (See rejection of Claim 24 above.)

Claim 26 is analyzed and discussed with respect to Claim 20. (See rejection of Claim 20 above.)

Claims 27 and 28 are analyzed and discussed with respect to Claim 20. (See rejection of Claim 20 above.)

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7, 9, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al (US 2002/0154909).

Regarding Claim 1, Yamazaki et al teaches a driving device which drives a focus adjusting system (fig. 8; referred to motor 122 and driver 124), and a control device (107') having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode (fig. 10; p. 6, paragraphs 0079-0086), which in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system (fig. 9 shows the determination at (1), (2), (3), and (4)), and if the focus adjusting system has been driven in one direction (interpreted as being driven from point (1) to point (2) and point (3) to point (4)) until the number of times of the determination repeatedly performed reaches a predetermined number of times (as used in calculating aa and bb; see p. 6, paragraphs 0083-0085), inverts the focus adjusting system from being driven in the one direction (referred to as hill climbing, paragraph 0086).

Regarding Claim 2, Yamazaki et al teaches the focus adjusting system includes a lens (105).

Claim 3 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

Regarding Claim 4, Yamazaki et al teaches if the focus adjusting system has been driven in one direction until the number of time of the determination repeatedly performed reaches the predetermined number of times, the control device inhibits the focus adjusting system from being driven in the one direction (step 1012 causes the focusing lens 105 to be driven toward the nearest distance).

Claim 5 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

Regarding Claim 6, Yamazaki et al teaches an image pickup device (106) which receives a light flux taken in through the focus adjusting system (105), wherein the control device repeatedly performs determination of a focusing state of the focus adjusting system on the basis of a picked-up image signal from the image pickup device (107' receives information from the signal via 113 and 801).

Regarding Claim 7, Yamazaki et al teaches an image pickup device (106) which receives a light flux taken in through the focus adjusting system (105), wherein the control device repeatedly performs determination of a focusing state of the focus adjusting system on the basis of a predetermined high-frequency component of a picked-up image signal from the image pickup device (p. 5, paragraph 0074).

Regarding Claim 9, Yamazaki et al teaches the control device (referred to as AF control microcomputer 107') controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state (p. 6, paragraph 0080-0088, last sentence).

Regarding Claims 17 and 18, Yamazaki et al teaches the apparatus includes an image pickup apparatus such as a camera (p. 1, paragraph 0004).

Regarding Claim 19, Yamazaki et al teaches the apparatus includes an optical apparatus (101, 102, 104, 105).

Allowable Subject Matter

5. Claims 8, 10-14 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding Claim 8, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a

predetermined number or time, inverts the focus adjusting system from being driven in the one direction, further comprising an image pickup device which receives light flux in through the focus adjusting system, wherein the control device controls the driving device **to drive the focus adjusting system in such a direction as to increase a predetermined high-frequency component of a picked-up image signal from the image pickup device,** as claimed in Claim 8.

Regarding Claim 10, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number or time, inverts the focus adjusting system from being driven in the one direction, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, wherein, if the focus adjusting **system has been driven within a predetermined range for a predetermined period of time**, the control device determines that the focus adjusting system is in an in-focus state, as claimed in Claim 10.

Regarding Claim 11, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a

control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number or time, inverts the focus adjusting system from being driven in the one direction, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, wherein, if the focus adjusting system **has been driven within a predetermined range for a predetermined period of time**, the control device stops driving of the focus adjusting system by the driving device.

Regarding Claim 12, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number or time, inverts the focus adjusting system from being driven in the one direction, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, wherein, if the focus adjusting **system has**

been driven beyond a predetermined range in a predetermined period of time, the control device controls the driving device to drive the focus adjusting system at a faster speed in a direction in which the focus adjusting system has been driven, as claimed in Claim 12.

Regarding Claim 13, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number or time, inverts the focus adjusting system from being driven in the one direction, wherein the control device controls the driving device to drive the focus adjusting system in such a direction as to bring the focus adjusting system into an in-focus state, wherein the control device has a first driving mode for minutely driving the focus adjusting system and a second driving mode for driving the focus adjusting system at high speed, and, in the first mode, if the focus adjusting system **has been driven in one direction until the number of times of the determination repeatedly performed reaches the predetermined number of times**, restrains the focus adjusting system from being driven in the one direction, as claimed in Claim 13.

Regarding Claim 16, the prior art neither teaches nor fairly suggests an apparatus comprising a driving device which drives a focus adjusting system, and a control device having a driving mode for minutely driving the focus adjusting system before a climbing-drive mode, which, in the driving mode, repeatedly performs determination of a focusing state of the focus adjusting system while causing the driving device to drive the focus adjusting system, and, if the focus adjusting system has been driven in one direction until the number of times of the determination repeatedly performed reaches a predetermined number or time, inverts the focus adjusting system from being driven in the one direction, wherein, in the first driving mode, if the focus adjusting system **has been driven beyond a predetermined range in a predetermined period of time, the control device controls the driving device to drive the focus adjusting system in the second driving mode in a direction in which the focus adjusting system has been driven**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Wilson whose telephone number is (571) 272-7322. The examiner can normally be reached on 8:30am-5:00pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JW
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